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[redacted]/SPECIAL HANDLING

16.14

25X1D0a
25X1D0a

BI-COLOR TEST
[redacted] FLIGHT 2A

FILE [redacted] TEST

1.0 Purpose

To evaluate Bi-color photography.

1.1 Special Instructions: Wratten 44A & 2B filters are used on the AFT camera

2.0 Test Plan

2.1 Flight Date: January - February, 1967
Flight Time: Local noon minus 2 hours

2.2 Altitude: K+15

2.3 Speed: 400 knots

2.4 Flight Course: Two flight lines are included. The prime flight line should be used under good photographic conditions. With poor photographic conditions the alternate course should be used.

Prime Flight Plan:

25X1D0b
Flight line A [redacted] course for a total of 4 passes over the city.

25X1D0b
Flight line B [redacted] Two passes over the target as indicated in the detailed flight line description.

25X1D0b
Flight line E [redacted] As described in the detailed flight line outline.

25X1D0b
Flight line F [redacted] Over resolution targets as indicated in the detailed flight line description.

Return to base

Total distance of prime photographic coverage: 300 n.m.
Total time required for prime photographic coverage: 45 minutes

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Alternate Flight Plan:

25X1D0b Flight line G [redacted] As indicated in the detailed flight outline.

25X1D0b Flight line H [redacted] As indicated in the detailed flight outline.

Flight line F [redacted] As indicated in the detailed flight outline.

Return to base.

Total distance of alternate photographic coverage: 260 n.m.

Total time required for alternate photographic coverage: 39 minutes

25X1D0a 2.5 Camera: [redacted] Configuration

2.5.1 FWD looking camera

25X1A5a1 Film: [redacted]

Slit width: .075"

Filter: Wratten #21

2.5.2 AFT looking camera

25X1A5a1 Film: [redacted]

Slit width: .150"

Filter: Wratten #44A and #2E (NOTE: if only only one filter will fit in, use the #44A)

2.6 Mode: III, 7 seconds per cycle

2.7 Aperture: T/4 (f/3.5)

2.8 Film Requirements for Each Camera:

Preflight Clearing	250	feet
Actual Photography	1000	feet
Total	1250	feet

2.9 Corn targets are to be displayed at both the prime and alternate flight lines:

25X1D0a Prime: [redacted]

25X1D0a Alternate: [redacted]

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2.9.1 Questions relating to deployment of Corn Targets can be directed to [redacted]

However, in case of emergency contact [redacted] or [redacted]

25X1A9a
25X1A9a
25X1A9a
25X1A6a

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[redacted]/SPECIAL HANDLING

NIGHT DETECTION CONTROL

25X1D0a [redacted] FLIGHT 4B

1.0 Purpose

To obtain daytime control for night photography.

25X1D0b 1.1 Special Instruction: [redacted] must be open or re-schedule the flight.

2.0 Test Plan

2.1 Flight Date: January-February, 1967. The flight should be scheduled in conjunction with 5B, either the day before or day after the night flight. Flight starting time: Local noon minus two hours.

2.2 Altitude: K + 15

2.3 Speed: 400 knots

2.4 Flight Course: Only one flight course is to be used. If weather is poor for photography the flight should be re-scheduled.

25X1D0b Flight line A [redacted] Two complete replicates of the flight line
25X1D0b (a total of four passes over [redacted].

25X1D0b Flight line B [redacted] As outlined in flight line details.

25X1D0b Flight line C [redacted] As outlined in flight line details (a total of five pases directly over the target).

25X1D0b Flight line E [redacted] As described in flight line details.

25X1D0a 2.5 Camera: [redacted] Configuration

2.5.1 Forward Looking Camera

25X1A5a1 Film: [redacted]

[redacted]/SPECIAL HANDLING

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Slit Width: .075
Filter: Wratten #21

2.5.2 AFT Looking Camera

25X1A5a1 Film: [redacted]
Slit Width: .075
Filter: Wratten #21

2.6 Mode III (7 sec) per cycle

2.7 Aperture T/4 (f/3.5)

2.8 Film Requirements for each Camera
Preflight clearing 250 feet
Actual photography 1000 feet
Total 1250 feet

25X1D0b 2.9 Corn targets are to be displayed [redacted]
25X1D0b outside [redacted]

Resolution targets are to be aligned parallel and perpendicular to flight line.

2.9.1 Questions relating to deployment of Corn Targets can be directed to [redacted]
25X1A9a However, in case of emergency contact [redacted] or
25X1A9a [redacted]
25X1A9a
25X1A6a

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NIGHT DETECTION

25X1D0a [redacted] FLIGHT 5 B

1.0 Purpose

25X1A5a1 To compare and evaluate the potential detection capability of [redacted]
25X1A5a1 and [redacted] at night. [redacted] must be open or flight should be re-scheduled.
25X1D0b

1.1 Special Instructions: A wratten 15 filter is to be used in the AFT camera. The frame lights in this camera should have a 1.0 ND filter to account for the faster film.

2.0 Test Plan

2.1 Flight Date: January-February, 1967. Flight starting time: two hours after sunset. in conjunction with 4B--either on night before or night after flight 4B.

2.2 Altitude: K + 15

2.3 Speed: 400 knots

2.4 Flight Course:

25X1D0b Flight line B [redacted] Two passes as indicated in detailed flight lines.

25X1D0b Flight line C [redacted] Five passes as indicated in the flight lines
25X1D0b directly over [redacted]

25X1D0b Flight line E [redacted] Area: As indicated in detailed flight line.

25X1D0a 2.5 Camera [redacted] Configuration

2.5.1 Forward Looking Camera

25X1A5a1 Film: [redacted]

Slit Width: Remove slit bar .375"

Filter: None

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2.5.2 AFT Looking Camera

25X1A5a1 Film: [redacted]

Slit Width: Remove slit bar .375"

Filter: Wratten #15

2.6 Mode: 9 seconds per cycle, Mode 1

2.7 Aperture: T/4 (F 3.5)

2.8 Film Requirements for Each Camera

Preflight clearing	250	feet
Actual Photography	1000	feet
Total	1250	feet

2.9 No corn targets are to be displayed.

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POLARIZER

25X1D0a [redacted] 10A

FLIGHT

1.0 Purpose

To provide photographic coverage at solar altitude 20-30° to determine if the use of a polarizing filter improves imagery by reducing specular reflections and contrast reduction due to haze.

1.1 Special Instructions: Clover leaf pattern is to be flown. Split slits are to be used with polarizers on half of the slit for each camera. The axis of polarizations to be different for each camera as illustrated in the accompanying figure.

2.0 Test Plan

2.1 Flight Date: January-February, 1967.

2.2 Flight Time: Over target at a true sun time of 9 am or when the sun is at an elevation of 20°. (This condition will

25X1D0b exist around December 15, 1966 at [redacted]

2.3 Altitude: K + 15

2.4 Speed: 400 knots

2.5 Flight Course:

25X1D0b Flight line I [redacted] (Clover Leaf): The flight plan consists of flight patterns to be flown along the azimuths shown and at the time (Dec. 15) listed for each.

Each flight pattern is to describe a clover leaf pattern covering each path twice and the target four times.

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Starting the cameras at a point 10 nautical miles from the target and following a heading of * "true" pass over the target [redacted] and continue to a point 10 miles beyond. Execute a turn to the left and starting at a point 10 miles from the target, follow a heading of *+90 true pass over the target and continue to a point 10 miles beyond. Execute a turn to the left and following a heading of *+180 true pass over the target on a reciprical course to pass 1. Execute a turn to the left and following a heading of *-90 true, fly a reciprocal course to run 2.

As a check, run 1 should be directly toward the sun, run 2 at 90^0 to the sun, run 3 with the sun directly behind and run 4 with the sun at 90^0.

* On December 15, at [redacted] the sun will have the following altitudes(2) and azimuths (A)

$\alpha = 0^0$	A =	[redacted]	True sun time Sunrise
$\alpha = 20^0$	A =		9 am
$\alpha = 25^0$	A =		9:30
$\alpha = 30^0$	A =		10:20
$\alpha = 35^0$	A =		

Coverage per run	20 nautical miles
Coverage per pattern	80 nautical miles
Coverage for three pattern	240 nautical miles

2.5 Camera [redacted] Configuration

2.5.1 Forward looking camera

Film: [redacted]

Slit Width, split slit: .075" and 0.150"

Filters: W#21 over entire slit, polarizing filter over 0.150" opening with axis of polarization parallel to flight line.

* Exact azimuths will depend on particular time and day when mission is flown.

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2.5.2 Aft looking camera

25X1A5a1 Film: [redacted]

Slit Width: Split slit: .075" and 0.150"

Filters W#21 over entire slit, polarizing filter over 0.150" opening with axis of polarization perpendicular to flight line.

2.6 Mode: III 7 seconds per cycle

2.7 Aperture: T/4

2.8 Film Requirements for Each Camera

Preflight clearing	250 feet
Actual pgotography	1000 feet
Total	1250 feet

25X1D0b

25X1D0b 2.9 Some targets are to be displayed at [redacted]

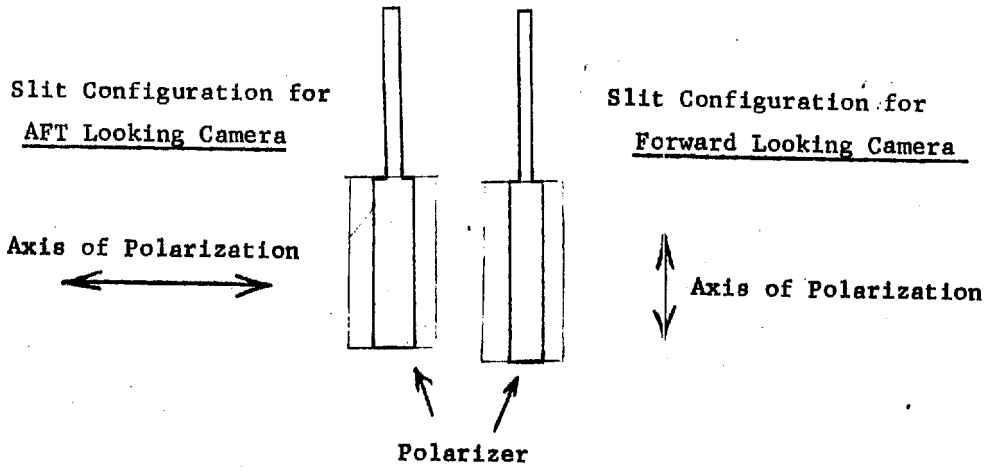
(Just outside of [redacted]

25X1A9a 2.9.1 Questions relating to deployment of Corn Targets can

25X1A9a be directed to [redacted]

25X1A9a However, in case of emergency contact [redacted] or

25X1A6a [redacted].



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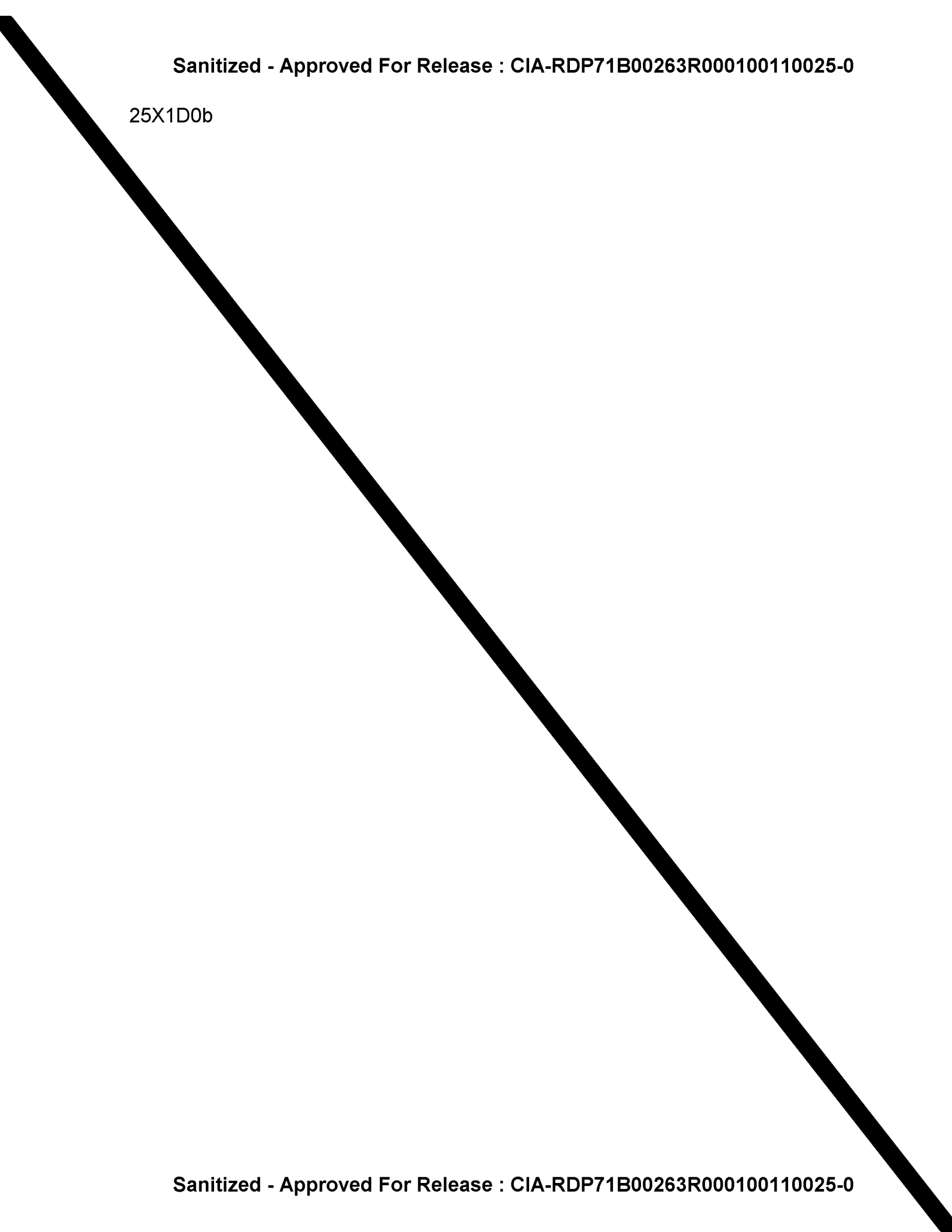
25X1D0b



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25X1D0a

2.5 Camera [redacted] Configuration

2.5.1 Forward Looking Camera

25X1A5a1

Film: [redacted]

Slit Width: .075"

Filter: 21

2.5.2 Aft Looking Camera

25X1A5a1

Film: [redacted]

Slit Width: .009"

Filter: Wratten # 15

2.6 Mode: III 7 seconds per cycle

2.7 Aperture: T/4 (f 3.5)

2.8 Film Requirements for Each Camera

Preflight clearing	250 feet
Actual photograph	1000 feet
Total	1250 feet

25X1D0b

2.9 Corn targets are to be displayed at [redacted]

25X1D0b

[redacted]

2.9.1 Questions relating to deployment of Corn Targets can be directed to [redacted]

25X1A9a

However, in case of emergency contact [redacted] or

25X1A9a

[redacted]

25X1A9a

25X1A6a

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25X1A5a1 EVALUATION OF [redacted]

25X1D0a [redacted] FLIGHT 11A

25X1A5a1 1.0 Purpose: To evaluate [redacted]

2.0 Test Plan

2.1 Flight Date: December, 1966, Starting time for flight: local noon minus two hours.

2.2 Altitude: K + 15

2.3 Speed: 400 knots

2.4 Flight Course:

Flight line A

25X1D0b [redacted] Two complete replicates of the [redacted] course for a
25X1D0b total of four passes over this city.

Flight line B

25X1D0b [redacted] Two passes over the target as indicated on the detailed flight line.

Flight line E

25X1D0b [redacted] As described in the detailed flight line.

25X1D0b Flight line F

[redacted] Over target area indicated in detailed flight line.

25X1D0a 2.5 Camera [redacted] Configuration

2.5.1 Forward Looking Camera

25X1A5a1 Film: [redacted]
Slit Width: .075"
Filter: #21

2.5.2 Aft Looking Camera

25X1A5a1 Film: [redacted]
Slit Width: .009"
Filter: Wratten #15

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2.6 Mode: III 7 seconds per cycle

2.7 Aperture: T/4 (f 3.5)

2.8 Film Requirements for Each Camera

Preflight clearing	250 feet
Actual photograph	1000 feet
Total	1250 feet

25X1D0b 2.9 Corn targets are to be displayed at [redacted]

25X1D0b [redacted]

2.9.1 Questions relating to deployment of Corn Targets can be directed to [redacted] However, in case of emergency contact [redacted]

25X1A9a or [redacted]

25X1A9a [redacted]

25X1A9a

25X1A6a

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25X1D0b

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